



079-us1.ST25.txt

## SEQUENCE LISTING

<110> Paz Einat, Louis Deiss and Ruth Maya  
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<150> US 06/413,810  
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Gly Ser Gln Thr Asn Leu Lys Asp Pro Val Gly Val Tyr Cys Arg Val  
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Arg Pro Leu Gly Phe Pro Asp Gln Glu Cys Cys Ile Glu Val Ile Asn  
35 40 45  
aat aca act gtt cag ctt cat act cct gag ggc tac aga ctc aac cga 192  
Asn Thr Thr Val Gln Leu His Thr Pro Glu Gly Tyr Arg Leu Asn Arg  
50 55 60  
aat gga gac tat aag gag act cag tat tca ttt aaa caa gta ttt ggc 240  
Asn Gly Asp Tyr Lys Glu Thr Gln Tyr Ser Phe Lys Gln Val Phe Gly  
65 70 75 80  
act cac acc acc cag aag gaa ctc ttt gat gtt gtg gct aat ccc ttg 288  
Thr His Thr Thr Gln Lys Glu Leu Phe Asp Val Val Ala Asn Pro Leu  
85 90 95  
gtc aat gac ctc att cat ggc aaa aat ggt ctt ctt ttt aca tat ggt 336  
Val Asn Asp Leu Ile His Gly Lys Asn Gly Leu Leu Phe Thr Tyr Gly  
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gtg acg gga agt gga aaa act cac aca atg act ggt tct cca ggg gaa 384  
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| gga ggg ctg ctt cct cgt tgt ttg gac atg atc ttt aac agt ata ggg<br>Gly Gly Leu Leu Pro Arg Cys Leu Asp Met Ile Phe Asn Ser Ile Gly<br>130 135 140     |     |     | 432  |
| tca ttt caa gct aaa cga tat gtt ttc aaa tct aat gat agg aat agt<br>Ser Phe Gln Ala Lys Arg Tyr Val Phe Lys Ser Asn Asp Arg Asn Ser<br>145 150 155 160 |     |     | 480  |
| atg gat ata cag tgt gag gtt gat gcc tta tta gaa cgt cag aaa aga<br>Met Asp Ile Gln Cys Glu Val Asp Ala Leu Leu Glu Arg Gln Lys Arg<br>165 170 175     |     |     | 528  |
| gaa gct atg ccc aat cca aag act tct tct agc aaa cga caa gta gat<br>Glu Ala Met Pro Asn Pro Lys Thr Ser Ser Ser Lys Arg Gln Val Asp<br>180 185 190     |     |     | 576  |
| cca gag ttt gca gat atg ata act gta caa gaa ttc tgc aaa gca gaa<br>Pro Glu Phe Ala Asp Met Ile Thr Val Gln Glu Phe Cys Lys Ala Glu<br>195 200 205     |     |     | 624  |
| gag gtt gat gaa gat agt gtc tat ggt gta ttt gtc tct tat att gaa<br>Glu Val Asp Glu Asp Ser Val Tyr Gly Val Phe Val Ser Tyr Ile Glu<br>210 215 220     |     |     | 672  |
| ata tat aat aat tac ata tat gat cta ttg gaa gag gtg ccg ttt gat<br>Ile Tyr Asn Asn Tyr Ile Tyr Asp Leu Leu Glu Glu Val Pro Phe Asp<br>225 230 235 240 |     |     | 720  |
| ccc ata aaa ccc aaa cct cca caa tct aaa ttg ctt cgt gaa gat aag<br>Pro Ile Lys Pro Lys Pro Pro Gln Ser Lys Leu Leu Arg Glu Asp Lys<br>245 250 255     |     |     | 768  |
| aac cat aac atg tat gtt gca gga tgt aca gaa gtt gaa gtg aaa tct<br>Asn His Asn Met Tyr Val Ala Gly Cys Thr Glu Val Glu Val Lys Ser<br>260 265 270     |     |     | 816  |
| act gag gag gct ttt gaa gtt ttc tgg aga ggc cag aaa aag aga cgt<br>Thr Glu Glu Ala Phe Glu Val Phe Trp Arg Gly Gln Lys Lys Arg Arg<br>275 280 285     |     |     | 864  |
| att gct aat acc cat ttg aat cgt gag tcc agc cgt tcc cat agc gtg<br>Ile Ala Asn Thr His Leu Asn Arg Glu Ser Ser Arg Ser His Ser Val<br>290 295 300     |     |     | 912  |
| ttc aac att aaa tta gtt cag gct ccc ttg gat gca gat gga gac aat<br>Phe Asn Ile Lys Leu Val Gln Ala Pro Leu Asp Ala Asp Gly Asp Asn<br>305 310 315 320 |     |     | 960  |
| gtc tta cag gaa aaa gaa caa atc act ata agt cag ttg tcc ttg gta<br>Val Leu Gln Glu Lys Glu Gln Ile Thr Ile Ser Gln Leu Ser Leu Val<br>325 330 335     |     |     | 1008 |
| gat ctt gct gga agt gaa aga act aac cgg acc aga gca gaa ggg aac<br>Asp Leu Ala Gly Ser Glu Arg Thr Asn Arg Thr Arg Ala Glu Gly Asn<br>340 345 350     |     |     | 1056 |
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| Thr | Cys | Met | Asp | Val | Leu | Arg | Glu | Asn | Gln | Met | Tyr | Gly | Thr | Asn | Lys |      |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |      |
| atg | gtt | cca | tat | cga | gat | tca | aag | tta | acc | cat | ctg | ttc | aag | aac | tac | 1200 |
| Met | Val | Pro | Tyr | Arg | Asp | Ser | Lys | Leu | Thr | His | Leu | Phe | Lys | Asn | Tyr |      |
|     | 385 |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |      |
| ttt | gat | ggg | gaa | gga | aaa | gtg | cgg | atg | atc | gtg | tgt | gtg | aac | ccc | aag | 1248 |
| Phe | Asp | Gly | Glu | Gly | Lys | Val | Arg | Met | Ile | Val | Cys | Val | Asn | Pro | Lys |      |
|     |     |     |     | 405 |     |     |     |     | 410 |     |     |     |     | 415 |     |      |
| gct | gaa | gat | tat | gaa | gaa | aac | ttg | caa | gtc | atg | aga | ttt | gcg | gaa | gtg | 1296 |
| Ala | Glu | Asp | Tyr | Glu | Glu | Asn | Leu | Gln | Val | Met | Arg | Phe | Ala | Glu | Val |      |
|     |     |     | 420 |     |     |     |     | 425 |     |     |     |     | 430 |     |     |      |
| act | caa | gaa | gtt | gaa | gta | gca | aga | cct | gta | gac | aag | gca | ata | tgt | ggt | 1344 |
| Thr | Gln | Glu | Val | Glu | Val | Ala | Arg | Pro | Val | Asp | Lys | Ala | Ile | Cys | Gly |      |
|     |     | 435 |     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |      |
| tta | acg | cct | ggg | agg | aga | tac | aga | aac | cag | cct | cga | ggt | cca | gtt | gga | 1392 |
| Leu | Thr | Pro | Gly | Arg | Arg | Tyr | Arg | Asn | Gln | Pro | Arg | Gly | Pro | Val | Gly |      |
|     | 450 |     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     |      |
| aat | gaa | cca | ttg | gtt | act | gac | gtg | gtt | ttg | cag | agt | ttt | cca | cct | ttg | 1440 |
| Asn | Glu | Pro | Leu | Val | Thr | Asp | Val | Val | Leu | Gln | Ser | Phe | Pro | Pro | Leu |      |
|     | 465 |     |     |     | 470 |     |     |     | 475 |     |     |     |     |     | 480 |      |
| ccg | tca | tgc | gaa | att | ttg | gat | atc | aac | gat | gag | cag | aca | ctt | cca | agg | 1488 |
| Pro | Ser | Cys | Glu | Ile | Leu | Asp | Ile | Asn | Asp | Glu | Gln | Thr | Leu | Pro | Arg |      |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |     |      |
| ctg | att | gaa | gcc | tta | gag | aaa | cga | cat | aac | tta | cga | caa | atg | atg | att | 1536 |
| Leu | Ile | Glu | Ala | Leu | Glu | Lys | Arg | His | Asn | Leu | Arg | Gln | Met | Met | Ile |      |
|     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |     |     |      |
| gat | gag | ttt | aac | aaa | caa | tct | aat | gct | ttt | aaa | gct | ttg | tta | caa | gaa | 1584 |
| Asp | Glu | Phe | Asn | Lys | Gln | Ser | Asn | Ala | Phe | Lys | Ala | Leu | Leu | Gln | Glu |      |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |      |
| ttt | gac | aat | gct | gtt | tta | agt | aaa | gaa | aac | cac | atg | caa | ggg | aaa | cta | 1632 |
| Phe | Asp | Asn | Ala | Val | Leu | Ser | Lys | Glu | Asn | His | Met | Gln | Gly | Lys | Leu |      |
|     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |      |
| aat | gaa | aag | gag | aag | atg | atc | tca | gga | cag | aaa | ttg | gaa | ata | gaa | cga | 1680 |
| Asn | Glu | Lys | Glu | Lys | Met | Ile | Ser | Gly | Gln | Lys | Leu | Glu | Ile | Glu | Arg |      |
|     | 545 |     |     |     | 550 |     |     |     |     | 555 |     |     |     |     | 560 |      |
| ctg | gaa | aag | aaa | aac | aaa | act | tta | gaa | tat | aag | att | gag | att | tta | gag | 1728 |
| Leu | Glu | Lys | Lys | Asn | Lys | Thr | Leu | Glu | Tyr | Lys | Ile | Glu | Ile | Leu | Glu |      |
|     |     |     |     | 565 |     |     |     |     | 570 |     |     |     |     | 575 |     |      |
| aaa | aca | act | act | atc | tat | gag | gaa | gat | aaa | cgc | aat | ttg | caa | cag | gaa | 1776 |
| Lys | Thr | Thr | Thr | Ile | Tyr | Glu | Glu | Asp | Lys | Arg | Asn | Leu | Gln | Gln | Glu |      |
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| 595 600 605   |      |
| aga tta gaa gcc agg ttg caa ggc atg gtg aca gaa acg aca atg aag | 1872 |
| Arg Leu Glu Ala Arg Leu Gln Gly Met Val Thr Glu Thr Thr Met Lys |      |
| 610 615 620   |      |
| tgg gag aaa gaa tgt gag cgt aga gtg gca gcc aaa cag ctg gag atg | 1920 |
| Trp Glu Lys Glu Cys Glu Arg Arg Val Ala Ala Lys Gln Leu Glu Met |      |
| 625 630 635 640   |      |
| cag aat aaa ctc tgg gtt aaa gat gaa aag ctg aaa caa ctg aag gct | 1968 |
| Gln Asn Lys Leu Trp Val Lys Asp Glu Lys Leu Lys Gln Leu Lys Ala |      |
| 645 650 655   |      |
| att gtt act gaa cct aaa act gag aag cca gag aga ccc tct cgg gag | 2016 |
| Ile Val Thr Glu Pro Lys Thr Glu Lys Pro Glu Arg Pro Ser Arg Glu |      |
| 660 665 670   |      |
| cga gat cga gaa aaa gtt act caa aga tct gtt tct cca tca cct gtg | 2064 |
| Arg Asp Arg Glu Lys Val Thr Gln Arg Ser Val Ser Pro Ser Pro Val |      |
| 675 680 685   |      |
| cct ctt tct agt aac tat att gct cag att tcc aac ggc cag caa ctc | 2112 |
| Pro Leu Ser Ser Asn Tyr Ile Ala Gln Ile Ser Asn Gly Gln Gln Leu |      |
| 690 695 700   |      |
| atg agc cag cca cag cta cat agg cgc tct aac tct tgc agc agc att | 2160 |
| Met Ser Gln Pro Gln Leu His Arg Arg Ser Asn Ser Cys Ser Ser Ile |      |
| 705 710 715 720   |      |
| tct gta gct tcc tgt att tcg gaa tgg gag cag aaa att cct acg tac | 2208 |
| Ser Val Ala Ser Cys Ile Ser Glu Trp Glu Gln Lys Ile Pro Thr Tyr |      |
| 725 730 735   |      |
| aac aca cct ctc aaa gtc aca tct att gca agg cgt agg cag cag gag | 2256 |
| Asn Thr Pro Leu Lys Val Thr Ser Ile Ala Arg Arg Arg Gln Gln Glu |      |
| 740 745 750   |      |
| cca gga caa agc aaa act tgt atc gtg tca gac aga agg cga ggg atg | 2304 |
| Pro Gly Gln Ser Lys Thr Cys Ile Val Ser Asp Arg Arg Gly Met     |      |
| 755 760 765   |      |
| tac tgg act gaa ggc agg gag gtg gtt cct aca ttc aga aat gag ata | 2352 |
| Tyr Trp Thr Glu Gly Arg Glu Val Val Pro Thr Phe Arg Asn Glu Ile |      |
| 770 775 780   |      |
| gaa ata gaa gag gat cat tgc ggc agg tta ctc ttt caa cct gat cag | 2400 |
| Glu Ile Glu Glu Asp His Cys Gly Arg Leu Leu Phe Gln Pro Asp Gln |      |
| 785 790 795 800   |      |
| aac gca cca cca att cgt ctc cga cac aga cga tca cgc tct gca gga | 2448 |
| Asn Ala Pro Pro Ile Arg Leu Arg His Arg Arg Ser Arg Ser Ala Gly |      |
| 805 810 815   |      |
| gac aga tgg gta gat cat aag ccc gcc tct aac atg caa act gaa aca | 2496 |
| Asp Arg Trp Val Asp His Lys Pro Ala Ser Asn Met Gln Thr Glu Thr |      |
| 820 825 830   |      |

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|---|------|
| gtc atg cag cca cat gtc cct cat gcc atc aca gta tct gtt gca aat | 2544 |
| Val Met Gln Pro His Val Pro His Ala Ile Thr Val Ser Val Ala Asn |      |
| 835 840 845   |      |
| gaa aag gca cta gct aag tgt gag aag tac atg ctg acc cac cag gaa | 2592 |
| Glu Lys Ala Leu Ala Lys Cys Glu Lys Tyr Met Leu Thr His Gln Glu |      |
| 850 855 860   |      |
| cta gcc tcc gat ggg gag att gaa act aaa cta att aag ggt gat att | 2640 |
| Leu Ala Ser Asp Gly Glu Ile Glu Thr Lys Leu Ile Lys Gly Asp Ile |      |
| 865 870 875 880   |      |
| tat aaa aca agg ggt ggt gga caa tct gtt cag ttt act gat att gag | 2688 |
| Tyr Lys Thr Arg Gly Gly Gly Gln Ser Val Gln Phe Thr Asp Ile Glu |      |
| 885 890 895   |      |
| act tta aag caa gaa tca cca aat ggt agt cga aaa cga aga tct tcc | 2736 |
| Thr Leu Lys Gln Glu Ser Pro Asn Gly Ser Arg Lys Arg Arg Ser Ser |      |
| 900 905 910   |      |
| aca gta gca cct gcc caa cca gat ggt gca gag tct gaa tgg acc gat | 2784 |
| Thr Val Ala Pro Ala Gln Pro Asp Gly Ala Glu Ser Glu Trp Thr Asp |      |
| 915 920 925   |      |
| gta gaa aca agg tgt tct gtg gct gtg gag atg aga gca gga tcc cag | 2832 |
| Val Glu Thr Arg Cys Ser Val Ala Val Glu Met Arg Ala Gly Ser Gln |      |
| 930 935 940   |      |
| ctg gga cct gga tat cag cat cac gca caa ccc aag cgc aaa aag cca | 2880 |
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| Arg Pro Leu Gly Phe Pro Asp Gln Glu Cys Cys Ile Glu Val Ile Asn |      |
| 35 40 45  |      |
| Asn Thr Thr Val Gln Leu His Thr Pro Glu Gly Tyr Arg Leu Asn Arg |      |
| 50 55 60  |      |

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Asn Gly Asp Tyr Lys Glu Thr Gln Tyr Ser Phe Lys Gln Val Phe Gly  
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Thr His Thr Thr Gln Lys Glu Leu Phe Asp Val Val Ala Asn Pro Leu  
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Val Asn Asp Leu Ile His Gly Lys Asn Gly Leu Leu Phe Thr Tyr Gly  
 100 105 110

Val Thr Gly Ser Gly Lys Thr His Thr Met Thr Gly Ser Pro Gly Glu  
 115 120 125

Gly Gly Leu Leu Pro Arg Cys Leu Asp Met Ile Phe Asn Ser Ile Gly  
 130 135 140

Ser Phe Gln Ala Lys Arg Tyr Val Phe Lys Ser Asn Asp Arg Asn Ser  
 145 150 155 160

Met Asp Ile Gln Cys Glu Val Asp Ala Leu Leu Glu Arg Gln Lys Arg  
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Glu Ala Met Pro Asn Pro Lys Thr Ser Ser Ser Lys Arg Gln Val Asp  
 180 185 190

Pro Glu Phe Ala Asp Met Ile Thr Val Gln Glu Phe Cys Lys Ala Glu  
 195 200 205

Glu Val Asp Glu Asp Ser Val Tyr Gly Val Phe Val Ser Tyr Ile Glu  
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Ile Tyr Asn Asn Tyr Ile Tyr Asp Leu Leu Glu Glu Val Pro Phe Asp  
 225 230 235 240

Pro Ile Lys Pro Lys Pro Pro Gln Ser Lys Leu Leu Arg Glu Asp Lys  
 245 250 255

Asn His Asn Met Tyr Val Ala Gly Cys Thr Glu Val Glu Val Lys Ser  
 260 265 270

Thr Glu Glu Ala Phe Glu Val Phe Trp Arg Gly Gln Lys Lys Arg Arg  
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Ile Ala Asn Thr His Leu Asn Arg Glu Ser Ser Arg Ser His Ser Val  
 290 295 300

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Phe Asn Ile Lys Leu Val Gln Ala Pro Leu Asp Ala Asp Gly Asp Asn  
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Val Leu Gln Glu Lys Glu Gln Ile Thr Ile Ser Gln Leu Ser Leu Val  
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Asp Leu Ala Gly Ser Glu Arg Thr Asn Arg Thr Arg Ala Glu Gly Asn  
340 345 350

Arg Leu Arg Glu Ala Gly Asn Ile Asn Gln Ser Leu Met Thr Leu Arg  
355 360 365

Thr Cys Met Asp Val Leu Arg Glu Asn Gln Met Tyr Gly Thr Asn Lys  
370 375 380

Met Val Pro Tyr Arg Asp Ser Lys Leu Thr His Leu Phe Lys Asn Tyr  
385 390 395 400

Phe Asp Gly Glu Gly Lys Val Arg Met Ile Val Cys Val Asn Pro Lys  
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Ala Glu Asp Tyr Glu Glu Asn Leu Gln Val Met Arg Phe Ala Glu Val  
420 425 430

Thr Gln Glu Val Glu Val Ala Arg Pro Val Asp Lys Ala Ile Cys Gly  
435 440 445

Leu Thr Pro Gly Arg Arg Tyr Arg Asn Gln Pro Arg Gly Pro Val Gly  
450 455 460

Asn Glu Pro Leu Val Thr Asp Val Val Leu Gln Ser Phe Pro Pro Leu  
465 470 475 480

Pro Ser Cys Glu Ile Leu Asp Ile Asn Asp Glu Gln Thr Leu Pro Arg  
485 490 495

Leu Ile Glu Ala Leu Glu Lys Arg His Asn Leu Arg Gln Met Met Ile  
500 505 510

Asp Glu Phe Asn Lys Gln Ser Asn Ala Phe Lys Ala Leu Leu Gln Glu  
515 520 525

Phe Asp Asn Ala Val Leu Ser Lys Glu Asn His Met Gln Gly Lys Leu  
530 535 540

Asn Glu Lys Glu Lys Met Ile Ser Gly Gln Lys Leu Glu Ile Glu Arg  
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Leu Glu Lys Lys Asn Lys Thr Leu Glu Tyr Lys Ile Glu Ile Leu Glu  
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Lys Thr Thr Thr Ile Tyr Glu Glu Asp Lys Arg Asn Leu Gln Gln Glu  
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Leu Glu Thr Gln Asn Gln Lys Leu Gln Arg Gln Phe Ser Asp Lys Arg  
 595 600 605

Arg Leu Glu Ala Arg Leu Gln Gly Met Val Thr Glu Thr Thr Met Lys  
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Trp Glu Lys Glu Cys Glu Arg Arg Val Ala Ala Lys Gln Leu Glu Met  
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Gln Asn Lys Leu Trp Val Lys Asp Glu Lys Leu Lys Gln Leu Lys Ala  
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Ile Val Thr Glu Pro Lys Thr Glu Lys Pro Glu Arg Pro Ser Arg Glu  
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Arg Asp Arg Glu Lys Val Thr Gln Arg Ser Val Ser Pro Ser Pro Val  
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Pro Leu Ser Ser Asn Tyr Ile Ala Gln Ile Ser Asn Gly Gln Gln Leu  
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Met Ser Gln Pro Gln Leu His Arg Arg Ser Asn Ser Cys Ser Ser Ile  
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Ser Val Ala Ser Cys Ile Ser Glu Trp Glu Gln Lys Ile Pro Thr Tyr  
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Asn Thr Pro Leu Lys Val Thr Ser Ile Ala Arg Arg Arg Gln Gln Glu  
 740 745 750

Pro Gly Gln Ser Lys Thr Cys Ile Val Ser Asp Arg Arg Arg Gly Met  
 755 760 765

Tyr Trp Thr Glu Gly Arg Glu Val Val Pro Thr Phe Arg Asn Glu Ile



770

775

780

Glu Ile Glu Glu Asp His Cys Gly Arg Leu Leu Phe Gln Pro Asp Gln  
 785 790 795 800

Asn Ala Pro Pro Ile Arg Leu Arg His Arg Arg Ser Arg Ser Ala Gly  
 805 810 815

Asp Arg Trp Val Asp His Lys Pro Ala Ser Asn Met Gln Thr Glu Thr  
 820 825 830

Val Met Gln Pro His Val Pro His Ala Ile Thr Val Ser Val Ala Asn  
 835 840 845

Glu Lys Ala Leu Ala Lys Cys Glu Lys Tyr Met Leu Thr His Gln Glu  
 850 855 860

Leu Ala Ser Asp Gly Glu Ile Glu Thr Lys Leu Ile Lys Gly Asp Ile  
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Tyr Lys Thr Arg Gly Gly Gly Gln Ser Val Gln Phe Thr Asp Ile Glu  
 885 890 895

Thr Leu Lys Gln Glu Ser Pro Asn Gly Ser Arg Lys Arg Arg Ser Ser  
 900 905 910

Thr Val Ala Pro Ala Gln Pro Asp Gly Ala Glu Ser Glu Trp Thr Asp  
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atg aag tca gcg aga gct aag aca ccc cgg aaa cct acc gtg aaa aaa 165  
 Met Lys Ser Ala Arg Ala Lys Thr Pro Arg Lys Pro Thr Val Lys Lys  
 1 5 10 15

ggg tcc caa acg aac ctt aaa gac cca gtt ggg gta tac tgt agg gtg 213  
 Gly Ser Gln Thr Asn Leu Lys Asp Pro Val Gly Val Tyr Cys Arg Val  
 20 25 30

cgc cca ctg ggc ttt cct gat caa gag tgt tgc ata gaa gtg atc aat 261  
 Arg Pro Leu Gly Phe Pro Asp Gln Glu Cys Cys Ile Glu Val Ile Asn  
 35 40 45

aat aca act gtt cag ctt cat act cct gag ggc tac aga ctc aac cga 309  
 Asn Thr Thr Val Gln Leu His Thr Pro Glu Gly Tyr Arg Leu Asn Arg  
 50 55 60

aat gga gac tat aag gag act cag tat tca ttt aaa caa gta ttt ggc 357  
 Asn Gly Asp Tyr Lys Glu Thr Gln Tyr Ser Phe Lys Gln Val Phe Gly  
 65 70 75 80

act cac acc acc cag aag gaa ctc ttt gat gtt gtg gct aat ccc ttg 405  
 Thr His Thr Thr Gln Lys Glu Leu Phe Asp Val Val Ala Asn Pro Leu  
 85 90 95

gtc aat gac ctc att cat ggc aaa aat ggt ctt ctt ttt aca tat ggt 453  
 Val Asn Asp Leu Ile His Gly Lys Asn Gly Leu Leu Phe Thr Tyr Gly  
 100 105 110

gtg acg gga agt gga aaa act cac aca atg act ggt tct cca ggg gaa 501  
 Val Thr Gly Ser Gly Lys Thr His Thr Met Thr Gly Ser Pro Gly Glu  
 115 120 125

## 079-us1.ST25.txt

|   |      |
|---|------|
| gga ggg ctg ctt cct cgt tgt ttg gac atg atc ttt aac agt ata ggg<br>Gly Gly Leu Leu Pro Arg Cys Leu Asp Met Ile Phe Asn Ser Ile Gly<br>130 135 140     | 549  |
| tca ttt caa gct aaa cga tat gtt ttc aaa tct aat gat agg aat agt<br>Ser Phe Gln Ala Lys Arg Tyr Val Phe Lys Ser Asn Asp Arg Asn Ser<br>145 150 155 160 | 597  |
| atg gat ata cag tgt gag gtt gat gcc tta tta gaa cgt cag aaa aga<br>Met Asp Ile Gln Cys Glu Val Asp Ala Leu Leu Glu Arg Gln Lys Arg<br>165 170 175     | 645  |
| gaa gct atg ccc aat cca aag act tct tct agc aaa cga caa gta gat<br>Glu Ala Met Pro Asn Pro Lys Thr Ser Ser Ser Lys Arg Gln Val Asp<br>180 185 190     | 693  |
| cca gag ttt gca gat atg ata act gta caa gaa ttc tgc aaa gca gaa<br>Pro Glu Phe Ala Asp Met Ile Thr Val Gln Glu Phe Cys Lys Ala Glu<br>195 200 205     | 741  |
| gag gtt gat gaa gat agt gtc tat ggt gta ttt gtc tct tat att gaa<br>Glu Val Asp Glu Asp Ser Val Tyr Gly Val Phe Val Ser Tyr Ile Glu<br>210 215 220     | 789  |
| ata tat aat aat tac ata tat gat cta ttg gaa gag gtg ccg ttt gat<br>Ile Tyr Asn Asn Tyr Ile Tyr Asp Leu Leu Glu Glu Val Pro Phe Asp<br>225 230 235 240 | 837  |
| ccc ata aaa ccc aaa cct cca caa tct aaa ttg ctt cgt gaa gat aag<br>Pro Ile Lys Pro Lys Pro Pro Gln Ser Lys Leu Leu Arg Glu Asp Lys<br>245 250 255     | 885  |
| aac cat aac atg tat gtt gca gga tgt aca gaa gtt gaa gtg aaa tct<br>Asn His Asn Met Tyr Val Ala Gly Cys Thr Glu Val Glu Val Lys Ser<br>260 265 270     | 933  |
| act gag gag gct ttt gaa gtt ttc tgg aga ggc cag aaa aag aga cgt<br>Thr Glu Glu Ala Phe Glu Val Phe Trp Arg Gly Gln Lys Lys Arg Arg<br>275 280 285     | 981  |
| att gct aat acc cat ttg aat cgt gag tcc agc cgt tcc cat agc gtg<br>Ile Ala Asn Thr His Leu Asn Arg Glu Ser Ser Arg Ser His Ser Val<br>290 295 300     | 1029 |
| ttc aac att aaa tta gtt cag gct ccc ttg gat gca gat gga gac aat<br>Phe Asn Ile Lys Leu Val Gln Ala Pro Leu Asp Ala Asp Gly Asp Asn<br>305 310 315 320 | 1077 |
| gtc tta cag gaa aaa gaa caa atc act ata agt cag ttg tcc ttg gta<br>Val Leu Gln Glu Lys Glu Gln Ile Thr Ile Ser Gln Leu Ser Leu Val<br>325 330 335     | 1125 |
| gat ctt gct gga agt gaa aga act aac cgg acc aga gca gaa ggg aac<br>Asp Leu Ala Gly Ser Glu Arg Thr Asn Arg Thr Arg Ala Glu Gly Asn<br>340 345 350     | 1173 |
| aga tta cgt gaa gct ggt aat att aat cag tca cta atg acg cta aga<br>Arg Leu Arg Glu Ala Gly Asn Ile Asn Gln Ser Leu Met Thr Leu Arg<br>355 360 365     | 1221 |

## 079-us1.ST25.txt

|   |      |
|---|------|
| aca tgt atg gat gtc cta aga gag aac caa atg tat gga act aac aag<br>Thr Cys Met Asp Val Leu Arg Glu Asn Gln Met Tyr Gly Thr Asn Lys<br>370 375 380     | 1269 |
| atg gtt cca tat cga gat tca aag tta acc cat ctg ttc aag aac tac<br>Met Val Pro Tyr Arg Asp Ser Lys Leu Thr His Leu Phe Lys Asn Tyr<br>385 390 395 400 | 1317 |
| ttt gat ggg gaa gga aaa gtg cgg atg atc gtg tgt gtg aac ccc aag<br>Phe Asp Gly Glu Gly Lys Val Arg Met Ile Val Cys Val Asn Pro Lys<br>405 410 415     | 1365 |
| gct gaa gat tat gaa gaa aac ttg caa gtc atg aga ttt gcg gaa gtg<br>Ala Glu Asp Tyr Glu Glu Asn Leu Gln Val Met Arg Phe Ala Glu Val<br>420 425 430     | 1413 |
| act caa gaa gtt gaa gta gca aga cct gta gac aag gca ata tgt ggt<br>Thr Gln Glu Val Glu Val Ala Arg Pro Val Asp Lys Ala Ile Cys Gly<br>435 440 445     | 1461 |
| tta acg cct ggg agg aga tac aga aac cag cct cga ggt cca gtt gga<br>Leu Thr Pro Gly Arg Arg Tyr Arg Asn Gln Pro Arg Gly Pro Val Gly<br>450 455 460     | 1509 |
| aat gaa cca ttg gtt act gac gtg gtt ttg cag agt ttt cca cct ttg<br>Asn Glu Pro Leu Val Thr Asp Val Val Leu Gln Ser Phe Pro Pro Leu<br>465 470 475 480 | 1557 |
| ccg tca tgc gaa att ttg gat atc aac gat gag cag aca ctt cca agg<br>Pro Ser Cys Glu Ile Leu Asp Ile Asn Asp Glu Gln Thr Leu Pro Arg<br>485 490 495     | 1605 |
| ctg att gaa gcc tta gag aaa cga cat aac tta cga caa atg atg att<br>Leu Ile Glu Ala Leu Glu Lys Arg His Asn Leu Arg Gln Met Met Ile<br>500 505 510     | 1653 |
| gat gag ttt aac aaa caa tct aat gct ttt aaa gct ttg tta caa gaa<br>Asp Glu Phe Asn Lys Gln Ser Asn Ala Phe Lys Ala Leu Leu Gln Glu<br>515 520 525     | 1701 |
| ttt gac aat gct gtt tta agt aaa gaa aac cac atg caa ggg aaa cta<br>Phe Asp Asn Ala Val Leu Ser Lys Glu Asn His Met Gln Gly Lys Leu<br>530 535 540     | 1749 |
| aat gaa aag gag aag atg atc tca gga cag aaa ttg gaa ata gaa cga<br>Asn Glu Lys Glu Lys Met Ile Ser Gly Gln Lys Leu Glu Ile Glu Arg<br>545 550 555 560 | 1797 |
| ctg gaa aag aaa aac aaa act tta gaa tat aag att gag att tta gag<br>Leu Glu Lys Lys Asn Lys Thr Leu Glu Tyr Lys Ile Glu Ile Leu Glu<br>565 570 575     | 1845 |
| aaa aca act act atc tat gag gaa gat aaa cgc aat ttg caa cag gaa<br>Lys Thr Thr Thr Ile Tyr Glu Glu Asp Lys Arg Asn Leu Gln Gln Glu<br>580 585 590     | 1893 |
| ctt gaa act cag aac cag aaa ctt cag cga cag ttt tct gac aaa cgc<br>Leu Glu Thr Gln Asn Gln Lys Leu Gln Arg Gln Phe Ser Asp Lys Arg                    | 1941 |

## 079-us1.ST25.txt

| 595   | 600 | 605 |      |
|---|-----|-----|------|
| aga tta gaa gcc agg ttg caa ggc atg gtg aca gaa acg aca atg aag<br>Arg Leu Glu Ala Arg Leu Gln Gly Met Val Thr Glu Thr Thr Met Lys<br>610 615 620     |     |     | 1989 |
| tgg gag aaa gaa tgt gag cgt aga gtg gca gcc aaa cag ctg gag atg<br>Trp Glu Lys Glu Cys Glu Arg Arg Val Ala Ala Lys Gln Leu Glu Met<br>625 630 635 640 |     |     | 2037 |
| cag aat aaa ctc tgg gtt aaa gat gaa aag ctg aaa caa ctg aag gct<br>Gln Asn Lys Leu Trp Val Lys Asp Glu Lys Leu Lys Gln Leu Lys Ala<br>645 650 655     |     |     | 2085 |
| att gtt act gaa cct aaa act gag aag cca gag aga ccc tct cgg gag<br>Ile Val Thr Glu Pro Lys Thr Glu Lys Pro Glu Arg Pro Ser Arg Glu<br>660 665 670     |     |     | 2133 |
| cga gat cga gaa aaa gtt act caa aga tct gtt tct cca tca cct gtg<br>Arg Asp Arg Glu Lys Val Thr Gln Arg Ser Val Ser Pro Ser Pro Val<br>675 680 685     |     |     | 2181 |
| cct tta ctc ttt caa cct gat cag aac gca cca cca att cgt ctc cga<br>Pro Leu Leu Phe Gln Pro Asp Gln Asn Ala Pro Pro Ile Arg Leu Arg<br>690 695 700     |     |     | 2229 |
| cac aga cga tca cgc tct gca gga gac aga tgg gta gat cat aag ccc<br>His Arg Arg Ser Arg Ser Ala Gly Asp Arg Trp Val Asp His Lys Pro<br>705 710 715 720 |     |     | 2277 |
| gcc tct aac atg caa act gaa aca gtc atg cag cca cat gtc cct cat<br>Ala Ser Asn Met Gln Thr Glu Thr Val Met Gln Pro His Val Pro His<br>725 730 735     |     |     | 2325 |
| gcc atc aca gta tct gtt gca aat gaa aag gca cta gct aag tgt gag<br>Ala Ile Thr Val Ser Val Ala Asn Glu Lys Ala Leu Ala Lys Cys Glu<br>740 745 750     |     |     | 2373 |
| aag tac atg ctg acc cac cag gaa cta gcc tcc gat ggg gag att gaa<br>Lys Tyr Met Leu Thr His Gln Glu Leu Ala Ser Asp Gly Glu Ile Glu<br>755 760 765     |     |     | 2421 |
| act aaa cta att aag ggt gat att tat aaa aca agg ggt ggt gga caa<br>Thr Lys Leu Ile Lys Gly Asp Ile Tyr Lys Thr Arg Gly Gly Gly Gln<br>770 775 780     |     |     | 2469 |
| tct gtt cag ttt act gat att gag act tta aag caa gaa tca cca aat<br>Ser Val Gln Phe Thr Asp Ile Glu Thr Leu Lys Gln Glu Ser Pro Asn<br>785 790 795 800 |     |     | 2517 |
| ggt agt cga aaa cga aga tct tcc aca gta gca cct gcc caa cca gat<br>Gly Ser Arg Lys Arg Arg Ser Ser Thr Val Ala Pro Ala Gln Pro Asp<br>805 810 815     |     |     | 2565 |
| ggt gca gag tct gaa tgg acc gat gta gaa aca agg tgt tct gtg gct<br>Gly Ala Glu Ser Glu Trp Thr Asp Val Glu Thr Arg Cys Ser Val Ala<br>820 825 830     |     |     | 2613 |
| gtg gag atg aga gca gga tcc cag ctg gga cct gga tat cag cat cac   |     |     | 2661 |

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|  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |  |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| Val  | Glu | Met | Arg | Ala | Gly | Ser | Gln | Leu | Gly | Pro | Gly | Tyr | Gln | His | His  |  |
|  |     | 835 |     |     |     |     | 840 |     |     |     |     | 845 |     |     |      |  |
| gca caa ccc aag cgc aaa aag cca tga actgacagtc ccagtactga          |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 2708 |  |
| Ala  | Gln | Pro | Lys | Arg | Lys | Lys | Pro |     |     |     |     |     |     |     |      |  |
|  |     | 850 |     |     |     | 855 |     |     |     |     |     |     |     |     |      |  |
| aagaacattt tcatttgtgt ggatgatttc tcgaaagcca tgccagaagc agtcttccag  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 2768 |  |
| gtcatcttgt agaactccag ctttgttgaa aatcacggac ctcagctaca tcatacactg  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 2828 |  |
| accagagca aagctttccc tatggttcca aagacaacta gtattcaaca aaccttgtat   |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 2888 |  |
| agtatatgtt ttgccatatt taatattaat agcagaggaa gactcctttt ttcatacactg |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 2948 |  |
| tatgaatttt ttataatgtt tttttaaaat atatttcatg tataacttata aactaattca |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3008 |  |
| cacaagtgtt tgtcttagat gattaaggaa gactatatct agatcatgtc tgatttttta  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3068 |  |
| ttgtgacttc tccagccctg gtctgaattt cttaaggttt tataaacaaa tgctgctatt  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3128 |  |
| tattagctgc aagaatgcac tttagaacta tttgacaatt cagactttca aaataaagat  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3188 |  |
| gtaaagtact ggccaataat aaccatttta ggaagggtgtt ttgaattctg tatgtatata |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3248 |  |
| ttcactttct gacattttaga tatgccaaaa gaattaaaat caaaagcact aagaaataaa |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3308 |  |
| aaaaaaaaaa aaaaaa  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 3324 |  |

<210> 6  
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 <212> PRT  
 <213> Homo sapiens

<400> 6

|   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met   | Lys | Ser | Ala | Arg | Ala | Lys | Thr | Pro | Arg | Lys | Pro | Thr | Val | Lys | Lys |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Gly Ser Gln Thr Asn Leu Lys Asp Pro Val Gly Val Tyr Cys Arg Val |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 20 25 30  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Arg Pro Leu Gly Phe Pro Asp Gln Glu Cys Cys Ile Glu Val Ile Asn |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 35 40 45  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asn Thr Thr Val Gln Leu His Thr Pro Glu Gly Tyr Arg Leu Asn Arg |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 50 55 60  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Asn Gly Asp Tyr Lys Glu Thr Gln Tyr Ser Phe Lys Gln Val Phe Gly |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 65 70 75 80   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Thr His Thr Thr Gln Lys Glu Leu Phe Asp Val Val Ala Asn Pro Leu |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 85 90 95  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

Val Asn Asp Leu Ile His Gly Lys Asn Gly Leu Leu Phe Thr Tyr Gly  
 100 105 110

Val Thr Gly Ser Gly Lys Thr His Thr Met Thr Gly Ser Pro Gly Glu  
 115 120 125

Gly Gly Leu Leu Pro Arg Cys Leu Asp Met Ile Phe Asn Ser Ile Gly  
 130 135 140

Ser Phe Gln Ala Lys Arg Tyr Val Phe Lys Ser Asn Asp Arg Asn Ser  
 145 150 155 160

Met Asp Ile Gln Cys Glu Val Asp Ala Leu Leu Glu Arg Gln Lys Arg  
 165 170 175

Glu Ala Met Pro Asn Pro Lys Thr Ser Ser Ser Lys Arg Gln Val Asp  
 180 185 190

Pro Glu Phe Ala Asp Met Ile Thr Val Gln Glu Phe Cys Lys Ala Glu  
 195 200 205

Glu Val Asp Glu Asp Ser Val Tyr Gly Val Phe Val Ser Tyr Ile Glu  
 210 215 220

Ile Tyr Asn Asn Tyr Ile Tyr Asp Leu Leu Glu Glu Val Pro Phe Asp  
 225 230 235 240

Pro Ile Lys Pro Lys Pro Pro Gln Ser Lys Leu Leu Arg Glu Asp Lys  
 245 250 255

Asn His Asn Met Tyr Val Ala Gly Cys Thr Glu Val Glu Val Lys Ser  
 260 265 270

Thr Glu Glu Ala Phe Glu Val Phe Trp Arg Gly Gln Lys Lys Arg Arg  
 275 280 285

Ile Ala Asn Thr His Leu Asn Arg Glu Ser Ser Arg Ser His Ser Val  
 290 295 300

Phe Asn Ile Lys Leu Val Gln Ala Pro Leu Asp Ala Asp Gly Asp Asn  
 305 310 315 320

Val Leu Gln Glu Lys Glu Gln Ile Thr Ile Ser Gln Leu Ser Leu Val

Asp Leu Ala Gly Ser Glu Arg Thr Asn Arg Thr Arg Ala Glu Gly Asn  
 340 345 350

Arg Leu Arg Glu Ala Gly Asn Ile Asn Gln Ser Leu Met Thr Leu Arg  
 355 360 365

Thr Cys Met Asp Val Leu Arg Glu Asn Gln Met Tyr Gly Thr Asn Lys  
 370 375 380

Met Val Pro Tyr Arg Asp Ser Lys Leu Thr His Leu Phe Lys Asn Tyr  
 385 390 395 400

Phe Asp Gly Glu Gly Lys Val Arg Met Ile Val Cys Val Asn Pro Lys  
 405 410 415

Ala Glu Asp Tyr Glu Glu Asn Leu Gln Val Met Arg Phe Ala Glu Val  
 420 425 430

Thr Gln Glu Val Glu Val Ala Arg Pro Val Asp Lys Ala Ile Cys Gly  
 435 440 445

Leu Thr Pro Gly Arg Arg Tyr Arg Asn Gln Pro Arg Gly Pro Val Gly  
 450 455 460

Asn Glu Pro Leu Val Thr Asp Val Val Leu Gln Ser Phe Pro Pro Leu  
 465 470 475 480

Pro Ser Cys Glu Ile Leu Asp Ile Asn Asp Glu Gln Thr Leu Pro Arg  
 485 490 495

Leu Ile Glu Ala Leu Glu Lys Arg His Asn Leu Arg Gln Met Met Ile  
 500 505 510

Asp Glu Phe Asn Lys Gln Ser Asn Ala Phe Lys Ala Leu Leu Gln Glu  
 515 520 525

Phe Asp Asn Ala Val Leu Ser Lys Glu Asn His Met Gln Gly Lys Leu  
 530 535 540

Asn Glu Lys Glu Lys Met Ile Ser Gly Gln Lys Leu Glu Ile Glu Arg  
 545 550 555 560



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Leu Glu Lys Lys Asn Lys Thr Leu Glu Tyr Lys Ile Glu Ile Leu Glu  
 565 570 575

Lys Thr Thr Thr Ile Tyr Glu Glu Asp Lys Arg Asn Leu Gln Gln Glu  
 580 585 590

Leu Glu Thr Gln Asn Gln Lys Leu Gln Arg Gln Phe Ser Asp Lys Arg  
 595 600 605

Arg Leu Glu Ala Arg Leu Gln Gly Met Val Thr Glu Thr Thr Met Lys  
 610 615 620

Trp Glu Lys Glu Cys Glu Arg Arg Val Ala Ala Lys Gln Leu Glu Met  
 625 630 635 640

Gln Asn Lys Leu Trp Val Lys Asp Glu Lys Leu Lys Gln Leu Lys Ala  
 645 650 655

Ile Val Thr Glu Pro Lys Thr Glu Lys Pro Glu Arg Pro Ser Arg Glu  
 660 665 670

Arg Asp Arg Glu Lys Val Thr Gln Arg Ser Val Ser Pro Ser Pro Val  
 675 680 685

Pro Leu Leu Phe Gln Pro Asp Gln Asn Ala Pro Pro Ile Arg Leu Arg  
 690 695 700

His Arg Arg Ser Arg Ser Ala Gly Asp Arg Trp Val Asp His Lys Pro  
 705 710 715 720

Ala Ser Asn Met Gln Thr Glu Thr Val Met Gln Pro His Val Pro His  
 725 730 735

Ala Ile Thr Val Ser Val Ala Asn Glu Lys Ala Leu Ala Lys Cys Glu  
 740 745 750

Lys Tyr Met Leu Thr His Gln Glu Leu Ala Ser Asp Gly Glu Ile Glu  
 755 760 765

Thr Lys Leu Ile Lys Gly Asp Ile Tyr Lys Thr Arg Gly Gly Gly Gln  
 770 775 780

Ser Val Gln Phe Thr Asp Ile Glu Thr Leu Lys Gln Glu Ser Pro Asn  
 785 790 795 800

079-us1.ST25.txt

Gly Ser Arg Lys Arg Arg Ser Ser Thr Val Ala Pro Ala Gln Pro Asp  
805 810 815

Gly Ala Glu Ser Glu Trp Thr Asp Val Glu Thr Arg Cys Ser Val Ala  
820 825 830

Val Glu Met Arg Ala Gly Ser Gln Leu Gly Pro Gly Tyr Gln His His  
835 840 845

Ala Gln Pro Lys Arg Lys Lys Pro  
850 855

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<400> 7  
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tcccagtact gaaagaacat ttccatttgt gtggatgatt tctcgaaagc catgccagaa 120  
gcagtcttcc aggtcatctt gtagaactcc agctttgtta aaatcacgga cctcagctac 180  
atcatacact gaccagagc a 201